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FINAL RESEARCH REPORT ON THE EFFECTIVENESS OF TELEVISION IN TEACHING GUIDANCE AT THE SIXTH GRADE LEVEL.

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EXPERIMENTAL TREATMENTS WERE USED WITH 20 SIXTH-GRADE CLASSES, RANDOMLY ASSIGNED TO ONE OF THE FOLLOWING--(1) A COURSE OF STUDY IN A SERIES OF 21 LESSONS, 20 MINUTES IN LENGTH, ON GUIDANCE WHICH WAS PRESENTED THROUGH THE MEDIUM OF TELEVISION TO THE "TV GROUP," AND (2) THE SAME COURSE OF STUDY, PRESENTED TO THE "TEACHER-LED GROUP" IN THE CLASSROOM BY THE REGULARLY ASSIGNED TEACHER. IN THE THIRD GROUP (CONTROL GROUP), THE ONLY INSTRUCTION IN GUIDANCE GIVEN WAS THAT WHICH WAS INCIDENTAL TO OTHER ASPECTS OF THE CURRICULUM. BOTH EXPERIMENTAL GROUPS EXCEEDED THE CONTROL GROUP ON INFORMATION AND PERSONAL ADJUSTMENT AT THE FIVE PERCENT LEVEL. THE TELEVISION INSTRUCTION WAS SUPERIOR TO THE LIVE TEACHER INSTRUCTION ON BOTH MEASURES. (LP)

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
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BY

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PORTLAND, MAINE

Title VII

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I

INTRODUCTION

Is television a panacea for all educational problems? Many people seem to think it is! Certainly, television can do much to eliminate such problems as a shortage of qualified teachers, crowded classrooms, and lack of proper and necessary equipment.

In a small community the school board may not be financially capable of hiring a science teacher for their high school of only sixty pupils and three teachers, including the principal. However, should a televised science program be available, these same pupils would have the opportunity to study under the direction of the country's best science instructors.

Mediocre teaching may be greatly improved with supplemental television courses. This may result not only in better classes for pupils but also provide an improvement in the teaching area.

Lack of sufficient equipment presently creates many a problem for the community budget. Once again, television can reduce this problem. One good set of equipment used for television rendition can result in teaching hundreds or even thousands of pupils at the same time while allowing each one of them a front seat for viewing and studying.

These are just a few of the ways in which television can reduce educational problems in the various school systems.

After approximately ten years of research in ETV, we can assume that television is a means by which good teaching can result in better education for more people than ever before in the entire history of the world. This conclusion involves subject matter from the elementary school level through professional graduate education.

Although quite a great deal of research has been done in relation to the effectiveness of television in teaching, either by supplementary courses or direct teaching, in many areas of study, to date there has been little research concerned with the effectiveness of presenting guidance information at the elementary level through the television medium. Guidance as such in the elementary school is a new and unknown program of study. Very few schools have an organized program of guidance in the elementary grades. Many communities may see the need for such a program, but may not be able to finance the cost of it. Here again is where television may prove invaluable.

Objectives

This research project constituted a study of the effectiveness of television in presenting guidance information in such problems as family relationship, health, social skills, self-concern, social and school relationships. This research was based upon a pilot study made in June 1960 of problems confronted by fifth and sixth-grade pupils through the administration of the California Test of Personality.

Keeping in mind these interests, the problems, and achievement levels of these pupils, the evidence as concerned with the following questions was sought:

1. How effectively can guidance information related to the adjustment problems of sixth-grade pupils be transmitted by television?
2. Is there any significant difference in learning through information presented by television when compared with the presentation of identical material by the conventional classroom teacher?
3. What is the relationship between intelligence and such learning by television?
4. Are such variables as sex, socio-economic level, intelligence, and reading achievement related to the problems experienced by pupils?

An effective program of guidance information should contribute to the development of a more favorable attitude towards others, better family relationship, and a well adjusted personality.

Scope of Study

The study being reported in the ensuing pages was made possible by a grant from the United States Office of Education, Department of Health, Education, and Welfare, through the New Educational Media Branch under the National Defense Act of 1958. Some of the research work consisted of the use of approximately 516 sixth-grade pupils of both sexes from schools in the City of Portland, Maine. The study also required the services of twenty classroom teachers...seven teachers in the utilization of the televised lessons, seven teachers to instruct in the conventional classroom method and using the same subject material as that used in the television lessons, and six teachers whose classes were used as the Control Group. Testing was conducted both in September and January, immediately preceding and immediately following the twenty-one televised lessons of the Guidance Series which were presented during the period of September through December of 1960.

II

REVIEW OF RELATED RESEARCH

TELEVISION IN INSTRUCTION

Educational television is any television experience which broadens an individual, arouses his creative ability, extends his capabilities, and better equips him to achieve his ultimate potential, whatever that may be.

With this thought in mind, let us consider the progress made by ETV since its debut in 1953. At that time there was one institution of higher learning offering two courses through the medium of television. Last year, the number was 117 with colleges, universities, and school systems offering 464 courses (McKune, 1). Ten years ago, there was one television station licensed to an educational institution. This year, 45 are in operation. In addition, 119 institutions are using closed-circuit television for instructional purposes. (Joint Council on ETV, Wash., 2).

It is now possible for a person to obtain his first two years of college education by means of television (Chauscw, 6). The high school student in a rural district can obtain courses in Mathematics and Science heretofore not offered in his small school. The busy schoolteacher can also obtain in-service training by means of television without leaving his or her school.

In the above ways television has grown, and this growth should give a sufficient vote of confidence towards the effectiveness of using television for educational purposes. However, not everyone in the educational profession accepts television on this basis. Some remember the glowing promises of educational radio, which is still with us but far from fulfilling its early promises. Some are afraid that ETV will ultimately replace the teacher, while others not inclined to a change of pace in education look the other way hoping that the monster will disappear.

To cope with all this disapproval, much research has come to light during the past decade with regard to the effectiveness of ETV.

In 1956, a small booklet was published in an attempt to bring together all of the research work done on instructional television (An Inventory of Instructional Television Research, 3). At that time, the major findings seemed to be these (Kumata, 10):

1. On subject-matter tests, no significant difference was the overwhelming finding in the comparison of television students with conventionally-taught students.
2. On short-term retention tests on subject-matter content, the usual finding was that of no significant difference between conventionally-taught and TV students.

3. Acceptance of television by students varied although there was a tendency towards rejection of television.
4. Increasing the size of classes, having proctors in the television room, and providing for talk-back facilities did not have any significant effect on amount learned by television students.
5. It was uncertain whether a novelty effect existed or not.
6. Not enough evidence was obtained to make definite statements about attitude change toward subject-matter content or gain in critical thinking ability, some of the so-called "intangibles" of education.

We can now re-examine these findings in the light of a number of more recent studies.

The overwhelming majority of studies have been concerned with the problem of information gain. As in 1956, most of these more recent studies have shown no significant difference in information gain between students taught by means of television and those taught by the conventional classroom method.

It was reported by Holmes that of 281 comparisons made, he found 246 which produced no significant difference between television and classroom teaching (Holmes, 12). This same finding was reported in a variety of conditions, namely, large and small television classes, television classes with discussion follow-ups,

television classes of varying lengths, closed-circuit television, and television classes with two-way microphones (Murray, 7).

When differences were found, these seemed to be better explained through variables other than the mere fact of television transmission (Carpenter, 4).

It was found by Kanner that low-ability students learned more through television than under face-to-face conditions while high ability students learned more through face-to-face teaching (Kanner, 8).

Later studies produced mixed results. Carpenter, Macomber, and The Cincinnati Study, of 1956, all suggested that homogenious ability-level groupings should be used, and that television lessons should be pitched to that level in order to avoid losing high or low-ability students when heterogenious groupings are used (Carpenter, 4; Macomber, 5; The Cincinnati Study, 9).

No significant differences were found when the television lesson was offered over a commercial television station network compared with that of a local ETV station with respect to achievement and to amount of attitude change in the desired direction (Kumata, 10).

In conclusion, the accumulative findings of research provide steadily mounting evidence that:

1. Practically all of the common school subjects can be taught acceptably well by television.

2. Students taking courses through the television medium tend to do about as well, in some cases perhaps somewhat better, on achievement tests as those who take the same courses conventionally.
3. Face-to-face teaching was found to be superior to television in the immediate post-test situation. However, in retention tests given a month later, this difference no longer existed.
4. The size of viewing groups seems to make no measurable difference on the effectiveness of direct teaching by television.
5. Elementary school children accept teaching through the television medium with greater enthusiasm than high school or college students.

III

PROCEDURE

Materials

The experimental materials were a series of twenty-six, twenty-minute Guidance Programs entitled "Discovering Yourself," written, produced, and taught by Olga Lemke. These programs were designed to develop an awareness and an understanding toward personal and social problems characteristic of the sixth-grade age level. Such topics as growth and development of the body, emotional growth, social problems, home and family living, and citizenship development were covered.

The program resumes which follow were presented over WCSH-TV, Channel 6, Portland, Maine, and viewed by 516 sixth-grade pupils from the Portland, Maine, area. Many of the programs were produced with the assistance of peer groups in order to increase understanding and interest in the problems.

"Discovering Yourself"

1. Why Am I Different?

This program discussed rates of growth in boys and girls. It illustrated the importance of the pituitary gland in the body, the factor of lack of control of body limbs during this period of rapid growth, and the part heredity plays in physical development.

Special stress was placed upon the fact that each individual develops at his own rate rather than by group measurement.

2. Full Length Portrait.

The importance of posture to health was emphasized in this program by the characterization of "Sloppy Sue," "Lazy Lou," "Tilting Tillie," etc. Junior high school boys and girls demonstrated exercises for improving posture, asking the viewing groups to participate. Causes for poor posture, such as emotional upset, lack of sleep, tight shoes, and other causes, were shown and discussed.

3. Good Grooming.

Boys and girls of sixth-grade level served as models in this program. Daily care of hair and body was discussed. Hair styles for boys were shown by the director of a school for barbers, and three girls modeled, before and after, the correct hair styles performed by a beauty parlor operator as he actually cut and shaped the girls' hair on television.

4. Are You a Copy Cat?

One of the prime objectives of this program was to help the pupil understand that in order to appear his best, he must be himself...not a carbon copy of someone else. Members of the peer group were selected to demonstrate the wise selection of clothing, emphasizing the best features for the various types of figures.

5. Your Manners Are Showing.

The objectives in this telecast program were to help pupils

understand the reasons for using good manners, particularly emphasizing the fact that good manners do not necessarily label one as a "sissy." Manners used in various situations, such as on the playground, in the cafeteria, hallway, auditorium, and in a bus, were portrayed by students of a junior high school, among them a football captain.

6. Information, Please.

This program was particularly aimed at the many boys and girls who refrain from attending parties and social functions because they do not feel secure in the knowledge of the correct way to act and the right thing to do. To assist these pupils in feeling more at ease when attending social functions, members of the peer group demonstrated social manners, such as table manners, basic rules of good conduct, and the common courtesies of everyday living.

7. Many Ways to Grow.

Pupils of this age are frequently asked by adults, "Why don't you grow up?" In the next instant, they are told, "You're too young to do that!" This too often results in the fact that young people are quite confused as to just what adults mean when they speak about "growing up." Through pantomime, various phases of emotional actions and reactions were demonstrated...those considered "grown-up" and those considered "childish." Situations which might be the cause of the emotions were also demonstrated.

8. It's a Two-Way Street.

From the minute one is born, getting along with others is of prime importance. Also, the way you get along with others changes as you grow older. By means of using the unfinished story technique with discussions by panel members of the peer group, various phases of popularity, friendship, etc., were emphasized.

9. Brothers and Sisters are Nice, But...

Problems within a family are often caused by jealousy among brothers and sisters. In this telecast, junior high pupils of various ages in a family, oldest, youngest, and middle child, spoke on the advantages of each of their own positions. Another important element of this program was to help the pupil see himself as his brother or sister might see him.

10. Parent's Eye-View.

This telecast was outlined to help the pupil understand that a parent's desire to make his children grow into fine citizens often determines the privileges which are granted to them. Also, the program pointed out to the pupil that he has a certain amount of responsibility towards his parents.

11. You and Your Best Friend.

Characteristics of real friends and standards for selecting friends were shown through a series of slides accompanied by a narration of facts. Again, the factor of growth was pointed out since it is a natural process for friends to often outgrow one another.

12. What is Honesty?

To emphasize the difference between honesty and dishonesty, two junior high pupils gave their descriptions of both phases. A panel of sixth-grade pupils then asked the experts questions concerning problems in which honesty and dishonesty were involved.

13. My Family Doesn't Have as Much Money.

Learning how to use money wisely is another part of growing up. This was demonstrated in this program through the use of a film which emphasized the method of saving money, that is, setting a goal, making a budget, and sticking with this budget, thereby making money go farther.

14. What Makes Us Afraid?

Everyone has fears whether he or she is willing to admit it or not. Of course, that is nothing to be ashamed of. The important thing is, how can one overcome these fears? To assist pupils in overcoming this problem, the film "Overcoming Fears" was shown during this program with a discussion by the narrator.

15. Taking Criticism!

This program was presented by means of art work, showing the different ways of "taking criticism" and expressions drawn at the time of explanation. Particular emphasis was placed on the fact that all criticism can be constructive. Various ways of accepting criticism were discussed.

16. Want to Make it?

Wise use of leisure time was the main topic on this program. Hobbies of various types were exhibited and explained.

17. You and Your Abilities.

This program dealt with the fact that everyone has some ability although it may be quite different from that of your friends or neighbors. Various types of abilities were demonstrated by junior high pupils.

18. What is Your Citizenship Score?

This program was particularly designed to emphasize the fact that citizenship is an ever-widening circle which starts in the home, then the school, the community, the state, the country, and now the world. The fact that citizenship starts when the child is born and not just when he reaches the age of twenty-one was also stressed.

19. Hometown, U.S.A.

To build a sense of pride about their own community, to review some of the early history of their city, and to assist the pupils in understanding some of the factors responsible for the growth of their city were the primary factors brought out in this program.

20. Modern Hometown, U.S.A.

This was a continuation of the previous program, showing in detail some of the plans underway to provide for the city's

growth. Also emphasized were recent acts of vandalism as related to city pride and good citizenship.

21. I Dare You!

This was the final program of the series. Through specially planned slides, the possible and often disastrous results of a "dare" were shown. The fact that it really takes more courage NOT to accept a "dare" than to accept it was also pointed out. In addition, rules of safety were discussed and demonstrated.

Due to debates held by presidential candidates, the President's acceptance speech, and major league baseball games, the television station was unable to release time for the completion of the remaining five programs.

Experimental Design

1. Identification of Problem: The Utilization of Television Instruction in Guidance Information at the Sixth-Grade Level.

This research study is planned to:

(a) Determine the effectiveness of television in imparting guidance information to groups of pupils at the sixth-grade level.

(b) To study the effect of guidance information upon the total adjustment of the groups.

(c) To determine the relationship of such variables as sex, socio-economic levels, IQ, and social status to the problems experienced or expressed by pupils at this age level.

2. Development of the Program:

Research has shown that teaching by television is as effective at all levels of instruction, from the elementary school to college level, as the conventional classroom method.

Television is an effective and efficient medium for teaching because:

(a) A larger number of pupils can be reached at one time.

(b) Children develop a clearer understanding of what they see and hear simultaneously.

(c) Slow learners acquire facts from television which they cannot learn through reading.

(d) It is possible that a child can identify himself through the television problems of his peers and thus learn to cope with his own problems.

Since television has been shown to be effective in many educational areas, it seems feasible that the medium of television might be effective in presenting guidance information to groups of sixth-grade pupils.

The need for guidance information is very real as shown by a newspaper article of August 7, 1960[1] concerned with the need for "Adolescent Clinics." This article listed such teen-age problems as:

"Am I popular?"

"Do I fit in with the crowd?"

"Am I too tall, too short, too fat, too skinny, overdeveloped or underdeveloped?"

Information given just prior to the adolescent period might eliminate many of these problems.

The large number of adolescents with emotional problems is another indication of the need for guidance

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[1] "Adolescent Clinics," PORTLAND SUNDAY TELEGRAM, Portland, Maine, August 7, 1960.

information. Most emotional problems originate early in life and become more deep-rooted and difficult as time goes on. Childhood problems should not be allowed to continue into adolescence and young adulthood.

Guidance, as such, is not an integral part of the elementary school curriculum. In some instances this may be due to:

(a) Lack of teachers.

(b) Full-time teaching schedules.

(c) Lack of funds.

It would appear that through the medium of television, a portion of these problems can be solved. The effectiveness of television in presenting guidance information is, of course, the purpose of this study.

To assure program material that would be suitable and relevant to the need for guidance information at the sixth-grade level, a pilot study was made with the administration of the California Test of Personality to 324 fifth-grade and 162 sixth-grade pupils in June of 1960. Pupils of these two grade levels were used to indicate types of problems experienced by pupils at the beginning and termination of the sixth grade.

The results of this study indicated the following problematical areas:

(1) Home and family relationship.

(2) Health.

(3) Self-concern.

(4) Social skills.

(5) Community relationship.

(6) School relationship.

Twenty-one programs based upon these areas were then planned and prepared for telecasting over Channel 6, WCSH-TV, Portland, Maine, for periods of twenty minutes each, twice weekly. The programming started on September 27, 1960 and terminated on December 15, 1960.

Techniques used to present these telecasts were:

(a) Role-playing.

(b) Demonstrations.

(c) Panel discussions.

(d) Films.

(e) Slides.

(f) Pantomime.

(g) Art.

(h) Filmstrips.

Members of the peer group were used whenever possible to present the guidance information.

3. Experimental Treatment:

Ten elementary schools in the three districts of Portland, Maine, were selected by the District Superintendents using socio-economic status as the determining factor in order to provide a comparable range within each district. The classrooms in these schools were assigned to a particular experimental treatment through use of random numbers, that is, seven were selected as the TV Group, seven as the Teacher-Led Group, and six as the Control Group.

TV Group

All information was introduced through the medium of television. No preparation for or follow-up of lesson material was presented.

Teacher-Led Group

Teachers were given an outline, two weeks in advance of telecast, containing objectives and summary of program material scheduled to be presented. Teachers were then encouraged to use their own initiative and imagination, as well as any resource material which they might consider relevant to the lesson material. No preparation or follow-up of the lesson was presented. Time allocations were the same as TV Group.

Control Group

This group received no organized or systematic information whatsoever in the field of guidance. Teachers kept a record of incidental teaching related to guidance as a natural result of curriculum in the conventional classroom, e.g., discussion of good citizenship, manners on the occasion of a school dance, etc.

4. Pretests:

Pretests were identical for all groups and were perpetuated through the administration of:

(a) The Sims Score Card of Socio-Economic Status.

(b) The California Test of Personality.

(c) The Mooney Problem Check List.

(d) Informational Guidance Test.

IQ scores were obtained from the Testing Department of the Portland, Maine, School System.

5. Post-Tests:

Following a period of four months, the following tests were readministered:

(a) The California Test of Personality.

(b) The Mooney Problem Check List.

(c) The Informational Guidance Test.

Population

The population consisted of 516 sixth-grade pupils selected at random by the schools within the three school districts of Portland, Maine. At this writing, neither district has any organized guidance program at the elementary level.

During June of 1960, 324 pupils in the sixth grade and 224 in the fifth grade were given the California Test of Personality to determine existing problem areas in order to develop suitable and relevant television programs.

In September of 1960, the Superintendent of Schools of Portland, Maine, the three District Superintendents, the Research Director, the Guidance Director, and Dr. Ralph Garry, Professor of Education at Boston University, met to discuss the research project. At this meeting the Superintendents and Directors were given the following facts:

(1) The need for the present research study.

(2) The objectives.

(3) The proposed procedure to be used in selecting the "target" population.

(4) The pre- and post-testing procedure for each pupil.

(5) The tentatively proposed contents of lessons for the television programs.

(6) The period of time necessary for the telecasting.

Then, by process of random sampling, the schools and sixth-grade classrooms were selected and became a part of the study.

One school in each district was randomly assigned to the TV Group, one to the Teacher-Led Group, and one to the Control Group. A total of twenty classrooms were involved, seven in the TV Group, seven in the Teacher-Led Group, and six in the Control Group.

Individual group meetings were held in each district with the principals and classroom teachers scheduled for work on the study. At these meetings, the following information was presented:

(1) The purpose of the study.

(2) The objectives.

(3) The proposed procedures.

(4) An explanation of the pre- and post-testing of the pupils.

(5) The basis of selection of material for lessons.

(6) Review and discussion of Teacher's Lesson Sheet, as well as the report sheets kept by each teacher.

(7) Pupil participation.

(8) Time for televised programs and teacher-led lessons to be synonymous.

Every effort was made to impress upon the teachers the importance of discouraging the discussion of problems during the school week as this would have greatly invalidated the entire research study.

Testing Schedule

The Director of Guidance in the Portland, Maine, School System offered the entire Guidance Staff at the Junior High level to administer and score all of the pre- and post-tests given in the study.

A preliminary meeting was held with all Junior High Counselors, the Director of Research, and the Director of Testing present. At this time, the following items were discussed:

(1) Brief review of need for research study, its objectives and procedure.

(2) Purposes for testing and scoring of tests, as well as administration.

(3) Study of tests to be administered, namely:

(a) Sims Score Card of Socio-Economic Status.

(b) California Test of Personality.

(c) Mooney Problem Check List.

(d) Informational Guidance Test.

The testing schedule was administered directly from the Guidance Offices under the direction of the Guidance Director. Each counselor administered the same test, both during the pre- and post-testing periods. It was felt that greater validity could be obtained through this procedure of handling the tests.

Each teacher was asked to keep a weekly record of the reactions of the pupils to the televised lessons in the TV Group,

the nature of instruction conducted by the conventional classroom teacher in the Teacher-Led Group, and the series of incidental teachings noted in the Control Group that could be directly attributed to the area of guidance instruction.

Individual weekly conferences were held with all teachers assigned to the research study to determine the suitability of subject material of lessons to age level as well as a discussion of immediate reaction of the pupils.

Pre-Testing

All pre-testing was done during the week of September 19, 1960, just prior to the beginning of the television series. Tests administered were:

(1) California Test of Personality.

(2) Mooney Problem Check List.

(3) Sims Score Card of Socio-Economic Status.

(4) Informational Guidance Test.

The Program Series

The series of twenty-one guidance programs entitled "Discovering Yourself" began with the first telecast on Tuesday, September 27, 1960, at 1:30 over WCSH-TV, Channel 6, Portland, Maine. Thereafter, they were televised every Tuesday and Wednesday at the same time with each program running for twenty minutes. The final program of the series was telecast on Wednesday, December 14, 1960. Due

to debates held by presidential candidates, the President's acceptance speech, and major league baseball games, the television station was unable to release time for the completion of the remaining five programs. The topics dealt with in these telecasts were personal, social, and emotional development, family relationship, good citizenship, and leisure time activities.

Post-Testing

The post-testing schedule took place during the week of January 3, 1961 following the Christmas recess. Post-testing included:

(1) California Test of Personality.

(2) Mooney Problem Check List.

(3) Informational Guidance Test.

It was deemed unnecessary to post-test with the Sims Score Card of Socio-Economic Status as changes in the socio-economic level within any family seemed unlikely to occur in such a short period of only four months.

Treatment of Data

All tests used were hand-scored. Coding sheets were used to record the test scores for each individual child, by class, on all tests administered. The data was then transferred to IBM Cards, computed, and used for the analyses of variance and correlation techniques. The

relationship between each of the experimental variables and the dependent variables was analyzed, as well as interaction between and among experimental variables.

IV

DATA GATHERED AND RESULTS

Test Construction

The preparation of the test items was preceded by a careful study of relevant source materials for guidance information at the elementary grade level. These sources were the available state outlines for work in guidance at the elementary level, some basic texts, and the available personality tests written for this age level.

On the basis of the information gathered, test items were prepared for the:

Informational Guidance Test in the multiple-choice form.

Five alternatives were set up from which the answer or answers could be selected. 90 Correct items were contained in the test of 225 items in 45 questions. The same test was used for pre- and post-testing. Some sample items follow:

1. The gland responsible for your rate of growth is the:

    1. Endocrine
    2. Pituitary
    3. Salivary
    4. Tear
    5. Thyroid

Answer Sheet

1 2 3 4 5

// // // // //

2. To be popular, one needs:

   1. A cheerful disposition.
   2. An interest in many things.
   3. Plenty of spending money.
   4. Pretty clothes.
   5. To have a car.

Answer Sheet

1	2	3	4	5
//	//	//	//	//

3. The steps in solving a problem are:

   1. Decide which method will be best solution.
   2. Discuss it with everyone.
   3. See the problem clearly.
   4. Talk with different people who might help.
   5. Think of different ways to solve it.

Answer Sheet

1	2	3	4	5
//	//	//	//	//

Reading Level of Instrument

The items were carefully developed with regard to reading difficulty and subject-matter comprehension. The judgment of elementary school teachers was used to determine suitability of vocabulary. The vocabulary was checked against the Rinsland and Thorndike Word Test to verify subjective evaluation. The test items were read aloud to the pupils by the examiner to eliminate the possibility of reading difficulties.

Preliminary Administration

To determine item difficulty and validity of the test and to detect items which might be weak and ambiguous, a pilot demonstration of all items was conducted. The beginning seventh graders of all Junior High Schools in Portland, Maine, were selected for the trial demonstration. Items

receiving more than 50% correctness were discarded, as were items receiving less than 12% correctness, thus ascertaining the difficulty and discrimination power of the item.

Validity

The validity of the instrument was established by:

(1) Content Validity

The content area to be tested was systematically analyzed to ascertain that all major aspects of guidance instruction were covered by the items.

(2) Face Validity

The judgment of the Director of Guidance and two Junior High Counselors was obtained as to the appropriateness of the items.

Reliability

Reliability was obtained through the use of the split-half reliability technique, comparing scores of odd versus even items on the test. Corrected for attenuation by use of the Spearman-Brown formula, the estimated reliability coefficient is .74.

Results

The most important contribution which resulted from this research study was the determination of the most effective method of presenting the informational guidance material.

Analysis of variance was used to determine the degree of learning through a comparison of the pre- and post-test scores of the Informational Guidance Test. Comparisons were made between the TV Group vs. the Teacher-Led Group (Table 1), the TV Group vs. the Control Group (Table 2), and the Teacher-Led Group vs. the Control Group (Table 3). In the first two instances the F ratios showed a significant difference at the 5% level in favor of the TV Group, and in the last instance in favor of the Teacher-Led Group.

Table 1. Analysis of Variance on the Pre- and Post-Test Scores of the Informational Guidance Test Between the TV Group and the Teacher-Led Group.

Source of Variation	Df.	Sum of Squares	Mean Square	F Ratio
Groups	1	1752.	1752.	6.2*
Trials	1	14605.	14605.	189.8**
G X T	1	82.	82.	1.1
Subject	374	105332.	10282.	3.7
Residual	374	28780.	77.	
TOTAL	751	150550.		

* Significant at the 5% level.
** Significant at the 1% level.

These analyses reveal that there is a significant difference at the 5% level, for which an F ratio of 3.86 is required with 1 and 374 degrees of freedom.

The TV Group showed a greater increase in actual learning than that of the Teacher-Led Group. The pre-test mean of the Teacher-Led Group on the Informational Guidance Test was 44.8 as compared with the pre-test mean of 41.1 of the TV Group. The post-test mean of the Teacher-Led Group was 53.0 compared to 50.6 for the TV Group. This yielded a gain of 8.2 points for the Teacher-Led Group and 9.5 for the TV Group. Therefore, slightly, though significantly, more growth took place in the group which received the guidance information through the medium of television.

Table 2. Analysis of Variance on the Pre- and Post-Test Scores of the Informational Guidance Test Between the TV Group and the Control Group.

Source of Variation	Df.	Sum of Squares	Mean Square	F Ratio
Groups	1	5257.	5257.	17.0**
Trials	1	7949.	7949.	105.3**
G X T	1	1296.	1296.	17.2**
Subject	319	99185.	311.	4.1*
Residual	319	24078.	76.	
TOTAL	641	137764.		

* Significant at the 5% level.
** Significant at the 1% level.

Table 2 reports a difference significant at the 1% level in favor of the TV Group as well as a significant interaction effect.

The pre-test mean of the Control Group of 49.8 was considerably higher than that of the TV Group at 41.1. The post-test mean of the Control Group was 53.5 showing an increase of 3.7. The post-test mean of the TV Group was 50.6 showing an increase of 9.5. The television instruction was more effective than the incidental teaching received by the Control Group. The higher initial standing of the Control Group is probably a function of higher mean intelligence.

Analysis of variance shows a significant improvement in adjustment scores on the California Test of Personality significant at the 1% level of confidence in favor of the TV Group. Thus, both on information and adjustment television instruction was superior to incidental instruction.

Table 3. Analysis of Variance on the Pre- and Post-Test Scores of the Informational Guidance Test Between the Teacher-Led Group and the Control Group.

Source of Variation	Df.	Sum of Squares	Mean Square	F Ratio
Groups	1	1194.	1194.	4.0*
Trials	1	6581.	6581.	70.6**
G X T	1	782.	782.	8.4**
Subject	327	98852.	302.	3.2
Residual	327	30498.	92.	
TOTAL	657	137908.		

* Significant at the 5% level.
** Significant at the 1% level.

In the comparison in Table 3 between the Teacher-Led Group and the Control Group, the analysis reveals a difference between the pre- and post-test scores significant at the 5% level in the information received by the Teacher-Led Group. Again, the interaction effect is indicated.

The pre-test mean of the Teacher-Led Group was 44.8 in the pre-test situation as compared with a mean for the Control Group of 49.8. The Teacher-Led Group showed the greater gain in growth with an 8.2 increase while the Control Group showed an increase of 3.7.

In addition, the analyses of variance of the effect of socio-economic status, reading achievement, sex, and intelligence on information and adjustment showed:

1. Significant differences in type and number of problems associated with socio-economic status, with the lower socio-economic group reporting more problems.
2. Significant differences in type and number of problems associated with sex, with girls reporting more personal and social problems.
3. Better readers report significantly fewer problems on all sections of the adjustment inventory.

V.

SUMMARY

Twenty sixth-grade classes in the City of Portland, Maine, were randomly assigned to the experimental treatments. In one treatment, a course of study in a series of 21 lessons, 20 minutes in length, on guidance was presented through the medium of television to the TV Group; in the second, the same course of study was presented to the Teacher-Led Group in the classroom by the regularly assigned teacher; in the third group, the only instruction in guidance given the Control Group was that which was incidental to other aspects of the curriculum.

Analyses of variance were made of the gain resulting in guidance information and the total adjustment.

VI.

CONCLUSIONS

As a result of the study described in this paper, the following conclusions were made:

1. Statistically significant differences were obtained between the control and experimental groups in learning as measured by the Informational Guidance Test. The differences were in favor of the experimental groups. Gains in information were related to the method of instruction with television instruction superior to conventional.
2. Both experimental groups showed equivalent gains in adjustment measured by the California Test of Personality but both were significantly superior at the 5% level in gains when compared to the Control Group.
3. Statistically significant differences in kind and number of problems reported on the California Test of Personality are associated with differences in socio-economic status, sex, intelligence, and reading achievement.

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